

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/23/2008 has been entered.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Andrew J Lee (Reg. No. 60,371) on 07/06/2008.

The claims submitted on 04/23/2008 have been amended as follows:

1-3. (Canceled)

4. (Currently Amended) The method as recited in claim ~~[[1]]~~ 34, wherein the ~~present~~ preconfigured substitution information comprises a substitution configuration in which

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a group of DBMSs database access servers from [[a]] the first DBMS database access server to a last DBMS database access server are associated with each other such that the first DBMS database access server is to manage a storage area for [[a]] the second DBMS database access server, the second DBMS database access server is to manage a storage area for a third DBMS database access server, and the last DBMS database access server is to manage a storage area for the first DBMS database access server.

5. (Currently Amended) The method as recited in claim [[1]] 34, wherein the preset preconfigured substitution information comprises an n-to-1 substitution configuration whereby one DBMS database access server is to manage storage areas for n other DBMSs database access servers.

6 - 14. (Canceled)

15. (Currently Amended) The system as recited in claim [[12]] 37, wherein the preset preconfigured substitution information comprises a substitution configuration in which a group of DBMSs database access servers from [[a]] the first DBMS database access server to a last DBMS database access server are associated with each other-such that the first DBMS database access server is to manage a storage area for [[a]] the second DBMS database access server, the second DBMS database access server is to manage a storage area for a third DBMS database access server, and the last DBMS database access server is to manage a storage area for the first DBMS database access server.

16. (Currently Amended) The system as recited in claim [[12]] 37, wherein the preset preconfigured substitution information comprises an n-to-1 substitution configuration whereby one DBMS database access server is to manage storage areas for n other DBMSs database access servers.

17 - 33. (Canceled)

34. (Currently Amended) A method for processing databases in a system comprising a processing request receiving server, a plurality of storage areas, and a plurality of

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database access servers, wherein each storage area in the plurality of storage areas includes at least one database, and wherein each database access server in the plurality of database access servers is associated with a storage area in the plurality of storage areas, thereby enabling said each database access server to manage and access its associated storage area, the method comprising:

when a failure has occurred in a first database access server in the plurality of database access servers, obtaining preconfigured substitution information ~~identifying~~ including a mapping between the first database access server and a second database access server in the plurality of database access servers, wherein the first and second database access servers are distinct;

based on the ~~preconfigured substitution information~~ mapping, re-associating a storage area associated with the first database access server such that the storage area becomes associated with the second database access server, thereby enabling the second database access server to manage and access the storage area;

receiving a processing request directed to ~~a target~~ the first database access server ~~in the plurality of database access servers~~, the processing request being received by the processing request receiving server;

determining whether the ~~target first~~ database access server is in operation;

if the ~~target first~~ database access server is in operation, forwarding the processing request to the ~~target first~~ database access server, wherein the ~~target first~~ database access server is configured to process the forwarded processing request;

if the ~~target first~~ database access server is not in operation:

~~determining a~~ identifying the second database access server as a substitute database access server for the ~~target first~~ database access server based on the preconfigured substitution information;

modifying the processing request to include a substitution instruction; and

transmitting the modified processing request to the ~~substitute second~~ database access server, wherein the ~~substitute second~~ database access server is configured to identify the substitution instruction in the modified processing request, obtain execution environment information for the ~~target first~~ database access server, switch an execution

environment of the ~~substitute second~~ database access server to that of the ~~target first~~ database access server based on the execution environment information, and process the processing request on behalf of the ~~target first~~ database access server.

35. (Currently Amended) The method of claim 34, wherein the mapping associates an identifier of the first database access server with an identifier of the second database access server, the mapping indicating that ~~[[a]] the~~ storage area associated with the first database access server is to be associated with the second database access server when a failure occurs in the first database access server.

36. (Previously Presented) The method of claim 35, wherein the mapping further indicates that a storage area associated with second database access server is to be associated with the first database access server when a failure occurs in the second database access server.

37. (Currently Amended) A system for processing databases, the system comprising:
a processing request receiving server;
a plurality of storage areas, each storage area including at least one database; and
a plurality of database access servers, each database access server being associated with a storage area in the plurality of storage areas, thereby enabling said each database access server to manage and access its associated storage area,
wherein the processing request receiving server is configured to:
receive a processing request directed to a ~~target first~~ database access server in the plurality of database access servers;
determine whether the ~~target first~~ database access server is in operation;
if the ~~target first~~ database access server is in operation, forward the processing request to the ~~target first~~ database access server, wherein the ~~target first~~ database access server is configured to process the forwarded processing request;
if the ~~target first~~ database access server is not in operation:

obtain preconfigured substitution information including a mapping between the first database access server and a second database access server in the plurality of database access servers;

~~determine a~~ identify the second database access server as a substitute database access server for the ~~target first~~ database access server based on the preconfigured substitution information;

modify the processing request to include a substitution instruction;
and

transmit the modified processing request to the ~~substitute second~~ database access server, wherein the ~~substitute second~~ database access server is configured to identify the substitution instruction in the modified processing request, obtain execution environment information for the ~~target first~~ database access server, switch an execution environment of the ~~substitute second~~ database access server to that of the ~~target first~~ database access server based on the execution environment information, and process the processing request on behalf of the ~~target first~~ database access server.

38. (Currently Amended) The system of claim 37, wherein the ~~preconfigured substitution information includes a mapping associating~~ associates an identifier of the ~~target first~~ database access server with an identifier of the ~~substitute second~~ database access server, the mapping indicating that a storage area associated with the ~~target first~~ database access server is to be associated with the ~~substitute second~~ database access server when a failure occurs in the ~~target first~~ database access server.

39. (Currently Amended) The system of claim 38, wherein the mapping further indicates that a storage area associated with ~~substitute second~~ database access server is to be associated with the ~~target first~~ database access server when a failure occurs in the ~~substitute second~~ database access server.

42. (Currently Amended) [[A]] The method of claim 34, for processing databases in a system comprising a processing request receiving server, a plurality of storage areas, and a plurality of database access servers, wherein each storage area in the plurality of storage areas includes at least one database, and wherein each database access server in the plurality of database access servers is associated with a storage area in the plurality of storage areas, thereby enabling said each database access server to manage and access its associated storage area, the method comprising:

when a failure has occurred in a first database access server in the plurality of database access servers, obtaining preconfigured substitution information identifying a mapping between the first database access server and a second database access server in the plurality of database access servers, wherein the first and second database access servers are distinct;

based on the preconfigured substitution information, re-associating a storage area associated with the first database access server such that the storage area becomes associated with the second database access server, thereby enabling the second database access server to manage and access the storage area;

receiving a processing request directed to a target database access server in the plurality of database access servers, the processing request being received by the processing request receiving server;

determining whether the target database access server is in operation;

if the target database access server is in operation, forwarding the processing request to the target database access server, wherein the target database access server is configured to process the forwarded processing request;

if the target database access server is not in operation:

determining a substitute database access server for the target database access server based on the preconfigured substitution information;

modifying the processing request to include a substitution instruction; and

transmitting the modified processing request to the substitute database access server, wherein the substitute database access server is configured to identify the substitution instruction in the modified processing request, obtain execution environment information for the target database access server, switch an execution environment of the

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substitute database access server to that of the target database access server based on the execution environment information, and process the processing request on behalf of the target database access server;

wherein the preconfigured substitution information includes a plurality of mappings between database access servers, each mapping including priority information indicating a priority of said each mapping with respect to other mappings.

43. (Currently Amended) [[A]] The system of claim 37, for processing databases, the system comprising:

a processing request receiving server;

a plurality of storage areas, each storage area including at least one database; and

a plurality of database access servers, each database access server being associated with a storage area in the plurality of storage areas, thereby enabling said each database access server to manage and access its associated storage area;

wherein the processing request receiving server is configured to:

receive a processing request directed to a target database access server in the plurality of database access servers;

determine whether the target database access server is in operation;

if the target database access server is in operation, forward the processing request to the target database access server, wherein the target database access server is configured to process the forwarded processing request;

if the target database access server is not in operation:

determine a substitute database access server for the target database access server based on preconfigured substitution information;

modify the processing request to include a substitution instruction;

and

transmit the modified processing request to the substitute database access server, wherein the substitute database access server is configured to identify the substitution instruction in the modified processing request, obtain execution environment information for the target database access server, switch an execution environment of the

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~~substitute database access server to that of the target database access server based on the execution environment information, and process the processing request on behalf of the target database access server;~~

wherein the preconfigured substitution information includes a plurality of mappings between database access servers, each mapping including priority information indicating a priority of said each mapping with respect to other mappings.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Dated: 07/07/2008

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